

REMARKS

This Preliminary Amendment is filed together with a Request For Continued Examination. The Application has been carefully reviewed in light of the Office Action dated May 21, 2004 (Paper No. 8). Claims 1 to 3 and 5 to 7 are in the application, of which Claims 1 and 5, the independent claims, are being amended. Reconsideration and further examination are respectfully requested.

By the Office Action, Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,314,528 (Kim) and U.S. Patent No. 5,247,205 (Mototani), and Claims 3 and 7 are rejected under 35 U.S.C. § 103(a) over Kim and U.S. Patent No. 6,255,744 (Shih). Reconsideration and withdrawal of the rejections are respectfully requested.

The present invention generally concerns use of a backup battery when a main power supply is shut down. More particularly, in order to conserve the backup battery when the main power supply is shut down, a determination is made whether or not important data is stored in memory. When such important data is not stored in memory when the main power supply is shut down, power is not supplied from the backup battery. In contrast, it is determined that important data is stored in memory when the main power supply is shut down, power is supplied from the backup battery.

By virtue of the above arrangement, important data can be saved even when the main power supply is shut down, and deterioration of the backup battery can be prevented by determining whether or not to supply power from the backup battery, when the main power is shut down, based on whether or not important data is stored in memory.

Turning to the specific language of the claims, Claim 1 defines an electronic apparatus including a memory to which a power is supplied from a main power supply of the apparatus, a main switch for controlling turn-on/turn-off of the main power supply of the apparatus and a soft-switch for controlling mechanical closing/opening of the main switch. The apparatus comprises a control means, backup battery and switch means. The control means determines whether important data which causes serious damage when erased is stored in the memory, when the shutdown of the main power supply is instructed by the soft-switch, and for controlling a shutdown operation of the main power supply by the main switch according to a result of the determination. The backup battery supplies power to the memory while the main power supply is shut down. The switch means controls the supply from the backup battery to the memory.

One important feature of the invention is that the control means causes the switch means to forcibly hold the supply of power from the backup battery to the memory when the control means determines that important data is stored in the memory, while said control means causes the switch means not to supply the power from the backup battery to the memory when the control means determines that no important data is stored in the memory.

The applied art, namely Kim, Shih and Mototani, is not seen to disclose or to suggest the above-identified features, particularly as regards a control means which causes a switch means to forcibly hold the supply of power from the backup battery to the memory when the control means determines that important data is stored in the memory, while said control means causes the switch means not to supply the power from the backup

battery to the memory when the control means determines that no important data is stored in the memory.

Kim is seen to describe a computing system which sets a flag if a boot operation completes successfully, and a main power supply unit supplies power to the system until active programs are closed if the boot operation is successful. It is conceded, at page 3 of the Office Action, that Kim fails to disclose a backup power supply, supplying power from a backup power supply to memory when a main power supply is shut down, and/or not supplying power from the backup power supply when the main power supply is shut down.

In addition and in view of the concessions made in the Office Action, Kim is also not seen to show controlling a switch to forcibly hold the supply of power from the backup battery to the memory when the control means determines that important data is stored in the memory, while said control means causes the switch means not to supply the power from the backup battery to the memory when the control means determines that no important data is stored in the memory

Mototani is seen to describe controlling a switch to supply power from a battery based merely on a determination of the occurrence of an interruption in power supplied from the main power supply. (See Mototani, Abstract and col. 1, lines 40 to 60, col. 3, line 60 to col. 5, line 49 and Figures 3 and 5) Referring to col. 4, lines 17 to 35, Mototani is seen to describe that under normal operation when the main power supply is manually shut off, switch 6b (shown in Figures 3 and 4 of Mototani) is in an open state, and no battery power is supplied to loads 14-1 or 14-2. When, however, the main power supply

is abnormally shut off, switch 6b is closed causing battery power to be is provided to loads 14-1 and 14-2,. Thus, switch 6b of Mototani is understood to be controlled only by a determination that there has been an interruption from the main power supply.

Nothing in Mototani or Kim, when taken alone or in any permissible combination, is seen to describe control over a switch to forcibly hold the supply of power from the backup battery to the memory when the control means determines that important data is stored in the memory, and control of the switch means not to supply the power from the backup battery to the memory when the control means determines that no important data is stored in the memory.

Shih has been reviewed and is not seen to remedy the deficiencies noted with respect to Kim and Mototani. Shih is seen to describe an inexpensive battery backup, which provides backup power in response to a power interruption. Shih is not seen to show a control means which causes a switch means to forcibly hold the supply of power from the backup battery to the memory when the control means determines that important data is stored in the memory, while said control means causes the switch means not to supply the power from the backup battery to the memory when the control means determines that no important data is stored in the memory.

Accordingly, the applied art is not seen to disclose or to suggest a control means that controls a shutdown operation of a main power supply, and that forcibly holds a power supply from a backup battery to memory, when it is determined that the memory stores important data.

Therefore, for at least the foregoing reasons, Claim 1 is believed to be in

condition for allowance. Further, Applicants submit that Claim 5 is believed to be in condition for allowance for at least the same reasons.

The remaining claims are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California, office by telephone at (714) 540-8700. All correspondence should be directed to our address given below.

Respectfully submitted,



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